

THE NEW YORK BOTANICAL GARDEN

BRONX PARK (FORDHAM BRANCH P. O.)  
NEW YORK 58, N. Y.

PRESIDENT  
JOSEPH R. SWAN

VICE-PRESIDENTS  
HENRY DEF. BALDWIN  
JOHN L. MERRILL

TREASURER  
ARTHUR M. ANDERSON

DIRECTOR  
WILLIAM J. ROBBINS

December 5, 1946

Dr. Joshua Lederberg  
Osborn Botanical Laboratory  
Yale University  
New Haven, Connecticut

Dear Doctor Lederberg:

I have your interesting letter of December 4 and have noted that you are perhaps going to work on Neurospora tetrasperma, or some similar type. If you could see your way clear to come down to the laboratory for a day to go over this subject with me and discuss the mycological side of your problem, I think you would gain time on the whole. I have been busy lately discarding several hundred cultures which I have had standing around cluttering up my refrigerators. It just happens that I have not yet discarded the old stocks of N. tetrasperma and so may have several strains that you might use. My stocks of S<sub>1</sub> S<sub>9</sub> are slow growers but when grown together they grow much more vigorously. I think by mating and selecting from these two strains you could get strains that fruit much more abundantly than these two do now.

I have several wild type forms which fruit abundantly but the individual strains which mate grow just as fast as other heterocaryotic compound races. Out of the several hundred "hybrid" progeny it might be that you could find some that are suitable for your work. You could, of course, start with your wild type strain and by irradiating, mating and selecting you could develop your own desirable races, all of which would be good practice and good for your mycology.

I shall start out by sending you three or four cultures to begin with and see what I can find later on as I have opportunity make some cultures.

In the meantime you should read my first paper on "Indurated Ascus Abortion" published in MYCOLOGIA in 1934, and then the one on "Homozygous Abortion" in MYCOLOGIA in 1935. Probably best of all would be the paper on another lethal E, published in the Journal of Heredity in 1938. I have not the exact citations here right now. I think this last race has some possibilities, although normally ascospores that carry the lethal are unisexual and will not grow. You could get bisexual ascospores,

Dr. Lederberg

-2-

December 5, 1946

however, when the nucleus carrying the lethal and being normal is with another nucleus that is normal. Anyway, read these three papers and perhaps you will get some further idea on your best procedure. Of course you have read my paper on heterocaryotic vigor.

Look for some cultures within a few days now, and then expect something more a little later.

Yours sincerely,

  
B. O. Dodge  
Pathologist

BOD:S